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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,129	01/02/2002	Cory R. Carpenter	BEA920010029US1	8791
30011	7590	10/20/2004	EXAMINER	
LIEBERMAN & BRANDSDORFER, LLC 12221 MCDONALD CHAPEL DRIVE GAITHERSBURG, MD 20878			HUYNH, CONG LAC T	
			ART UNIT	PAPER NUMBER

2178

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/040,129	Applicant(s) CARPENTER, CORY R.	
	Examiner Cong-Lac Huynh	Art Unit 2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: the application filed on 1/02/02.
2. Claims 1-21 are pending in the case. Claims 1, 9, 15, 19 are independent claims.

Specification

3. The title is objected to since the word "identifier" is misspelled.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Jang et al., *An Effective Mechanism for Index Update in Structured Documents*, ACM 1999, pages 383-390.

Regarding independent claim 1, Jang discloses:

- following hierarchy of said data structure to reach a root of said data structure
(page 384, section 2.1 Unique element identifier (UID): traversing the structured document according to the order of the level-order tree implies traversing from the root to an element of the structured document where said

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element is considered equivalent to a target object; this inherently shows reaching the root of the structured document, which is the hierarchy, is performed before the traversal)

- traversing the data structure from said root until a target object is encountered
(page 384, section 2.1 Unique element identifier (UID): traversing the structured document according to the order of the level-order tree implies traversing from the root to an element of the structured document where said element is considered equivalent to a target object)
- generating said identifier from a location of said target in said data structure
(page 384, section 2.1 Unique element identifier (UID): assigning each encountered element in the structured document a UID)

Regarding claim 2, which is dependent on claim 1, Jang discloses incrementing a counter when a specified branch of the data structure is encountered (page 385, figure 2: counter c1 increments to c2 when a specified branch of the structure is encountered).

Regarding claim 3, which is dependent on claim 1, Jang discloses that traversing the data structure includes clearing a counter when a specified branch of the data structure is closed (page 385, figure 2: clearing a counter when the branch (c1, s1, p1-p3) is closed).

Regarding claim 4, which is dependent on claim 1, Jang discloses traversing the data structure includes recursively traversing the data structure (**page 385, last paragraph to page 386, 2nd paragraph**: assigning the UIDs to the elements of the structure document *during the traversal* where the UIDs reflect the *parent-child relationships* among the elements inherently shows recursively traversing. The reason is that it was known that each node above a target node is recursively determined and included in the document in walking up the tree. And also, it was known that each node below a target node is recursively determined and included in the document in walking down the tree).

Regarding claim 5, which is dependent on claim 1, Jang discloses updating said reference identifier to reflect changes in said data structure (page 386, 4.2 Changes in element structures, figure 6, page 387, 4.3 Update of postings: the UID is changed when the structured document is changed by insertion and deletion).

Regarding claim 6, which is dependent on claim 5, Jang discloses that updating said reference identifier includes resetting an index for said data structure when content of said data structure is amended (page 386, 4. Update of indices, 4.1 Change in element content: update the indices and UIDs when the content of the structured document is changed by insertion or deletion).

Regarding claim 7, which is dependent on claim 6, Jang discloses that the amended content includes content selected from the group consisting of: inserted content,

removed content, and reorganized content (page 384, 2nd paragraph, page 386, 4. Update of Indices, 4.1 Change in element content, and 4.2 Changes in element structures).

Regarding claim 8, which is dependent on claim 1, Jang discloses that said data structure is a standardized mark-up language (page 385, figure 4: SGML/XML documents, page 390, 7. Conclusion and future works).

Claims 9-14 are for a system of method claims 1-3, 5-8, and are rejected under the same rationale.

Claims 15-18 are for an article of method claims 1-3, and are rejected under the same rationale.

Regarding independent claim 19, Jang discloses:

- following hierarchy of said data structure to reach a root of said data structure (**page 384, section 2.1 Unique element identifier (UID)**: traversing the structured document according to the order of the level-order tree implies traversing from the root to an element of the structured document where said element is considered equivalent to a target object; this inherently shows reaching the root of the structured document, which is the hierarchy, is performed before the traversal)

- traversing the data structure from said root until a target object is encountered
(page 384, section 2.1 Unique element identifier (UID): traversing the structured document according to the order of the level-order tree implies traversing from the root to an element of the structured document where said element is considered equivalent to a target object)
- wherein the step of traversing the data structure includes changing a counter when a branch of said data structure is encountered (page 385, figure 2)
- generating said identifier from a location of said target in said data structure
(page 384, section 2.1 Unique element identifier (UID): assigning each encountered element in the structured document a UID)

Regarding claim 20, which is dependent on claim 19, Jang discloses clearing said counter when a specified branch of said data structure is closed and a target object is null, and incrementing said counter when a specified branch of said data structure is encountered (page 385, figure 2: when branch c1 with nodes c1, s1, s2, p1-p3 is closed and the target node is null, the counter p(n) is cleared, and c1 is incremented to c2 when the branch starting with node c2 is encountered).

Regarding claim 21, which is dependent on claim 19, Jang discloses updating said reference identifier to reflect changes in said data structure (page 386, 4.2 Changes in element structures; page 387, 4.3 Update of postings).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brown et al. (US Pat No. 6,549,221 B1, 4/15/03, 12/9/99).

Tenev et al. (US Pat No. 6,654,761 B2, 11/25/03, 7/29/98).

Junkin (US Pat No. 6,493,717 B1, 12/10/02, 6/16/99, priority 6/16/98).

Okamoto et al. (US Pat No. 6,510,425 B1, 1/21/03, 10/9/01, priority 2/24/99).

Rao et al. (US Pat No. 6,300,957 B1, 10/9/01, 7/29/98).

DeRose et al. (US Pat No. 6,167,409, 12/26/00, 3/1/96).

Tokui (US Pat No. 6,728,733 B2, 4/27/04, 3/1/01).

Burkett et al. (US Pat No. 6,635,089 B1, 10/21/03, 1/13/99).

Maslow et al. (US Pat App Pub No. 2002/0156803 A1, 10/24/02, 11/9/01).

Sedlar (US Pat App Pub No. 2003/0037056 A1, 2/20/03, 5/28/02, priority 2/18/99).

Friedman et al. (US Pat App Pub No. 2002/0199061 A1, 12/26/02, 6/1/01).

Shadmon et al. (US Pat No. 2002/0120598 A1, 8/29/02, 2/26/01).

Floyd, *Total DOMination*, Web Techniques, October 2000, vol. 5, Iss. 10, pg. 79, 7 pgs.

Tanaka et al., *Query Pairs as Hypertext Links*, IEEE 1991, pages 456-463.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cong-Lac Huynh whose telephone number is 571-272-4125. The examiner can normally be reached on Mon-Fri (8:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-4125.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Cong-Lac Huynh
Examiner
Art Unit 2178
10/15/04